

Yabin Sun

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Improved MEOL and BEOL Parasitic-Aware Design Technology Co-Optimization for 3 nm Gate-All-Around Nanosheet Transistor. IEEE Transactions on Electron Devices, 2022, 69, 462-468.	3.0	0
2	Design Optimization of Nanotube Tunnel Field-Effect Transistor with Bias-Induced Electron-Hole Bilayer. Silicon, 2022, 14, 9071-9082.	3.3	4
3	Vertically Stacked Nanosheets Tree-Type Reconfigurable Transistor With Improved ON-Current. IEEE Transactions on Electron Devices, 2022, 69, 370-374.	3.0	16
4	Impact of Process Fluctuations on RF Small-Signal Parameter of Gate-All-Around Nanosheet Transistor Beyond 3 nm Node. IEEE Transactions on Electron Devices, 2022, 69, 31-38.	3.0	5
5	Vertical MoS ₂ transistors with sub-1-nm gate lengths. Nature, 2022, 603, 259-264.	27.8	251
6	Investigation of total ionizing dose effects in 4H-SiC power MOSFET under gamma ray radiation. Radiation Physics and Chemistry, 2022, 197, 110219.	2.8	10
7	Impact of Process Variation on Nanosheet Gate-All-Around Complementary FET (CFET). IEEE Transactions on Electron Devices, 2022, 69, 4029-4036.	3.0	11
8	Co-Optimization Between Static and Switching Characteristics of LDMOS With p-Type Trapezoidal Gate Embedded in Drift Region. IEEE Transactions on Electron Devices, 2022, 69, 4102-4108.	3.0	1
9	Sub-THz Small-Signal Equivalent Circuit Model and Parameter Extraction for 3 nm Gate-All-Around Nanosheet Transistor. Processes, 2022, 10, 1198.	2.8	1
10	Ultra-Low On-Resistance TG-LDMOS With Three Separated Gates and High-k Dielectric Comparable to DG-LDMOS. , 2022, , .		1
11	Characterizing and modeling current gain degradation in bipolar transistor exposed to heavy ion radiation. Materials Science in Semiconductor Processing, 2021, 121, 105336.	4.0	3
12	Impact of Process Fluctuations on Reconfigurable Silicon Nanowire Transistor. IEEE Transactions on Electron Devices, 2021, 68, 885-891.	3.0	13
13	Performance Evaluation of Negative Capacitance Reconfigurable Field Effect Transistor for Sub 10 nm Integration. , 2021, , .		1
14	Evaluation of total-ionizing-dose effects on reconfigurable field effect transistors and SRAM circuits. Semiconductor Science and Technology, 2021, 36, 085011.	2.0	1
15	Enhanced logic gates and SRAM based on reconfigurable field-effect transistor with asymmetric spacer engineering. Semiconductor Science and Technology, 2021, 36, 115002.	2.0	0
16	Analysis of single-event effects in selected BOX-based FDSOI transistor and inverter. Radiation Physics and Chemistry, 2021, 186, 109526.	2.8	2
17	Evaluation of Single-Event-Transient Effects in Reconfigurable Field Effect Transistor Beyond 3 nm Technology Node. IEEE Transactions on Electron Devices, 2021, 68, 6001-6006.	3.0	3
18	Thermal Coupling Among Channels and Its DC Modeling in Sub-7-nm Vertically Stacked Nanosheet Gate-All-Around Transistor. IEEE Transactions on Electron Devices, 2021, 68, 6563-6570.	3.0	5

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19	Electro-thermal Investigation on SOI Accumulation Mode Tri-gate LDMOS. , 2021, , .		1
20	Analysis of Metal Work-Function Modulation Effect in Reconfigurable Field-Effect Transistor. IEEE Transactions on Electron Devices, 2020, 67, 3745-3752.	3.0	5
21	Analysis of gate-induced drain leakage in gate-all-around nanowire transistors. Journal of Computational Electronics, 2020, 19, 1463-1470.	2.5	7
22	A Vertical Combo Spacer to Optimize Electrothermal Characteristics of 7-nm Nanosheet Gate-All-Around Transistor. IEEE Transactions on Electron Devices, 2020, 67, 2249-2254.	3.0	29
23	Electronic Assessment of Novel Arch-Shaped Asymmetrical Reconfigurable Field-Effect Transistor. IEEE Transactions on Electron Devices, 2020, 67, 1894-1901.	3.0	11
24	Novel Reconfigurable Field-Effect Transistor With Asymmetric Spacer Engineering at Drain Side. IEEE Transactions on Electron Devices, 2020, 67, 751-757.	3.0	12
25	Impact of Geometry, Doping, Temperature, and Boundary Conductivity on Thermal Characteristics of 14-nm Bulk and SOI FinFETs. IEEE Transactions on Device and Materials Reliability, 2020, 20, 119-127.	2.0	26
26	Design Technology Co-Optimization for 3 nm Gate-All-Around Nanosheet FETs. , 2020, , .		5
27	Degradation and annealing characteristics of NPN SiGe HBT exposed to heavy ions irradiation. Radiation Physics and Chemistry, 2019, 165, 108433.	2.8	4
28	Physical mechanism of performance adjustment in selective buried oxide n-MOSFETs. Science China Information Sciences, 2019, 62, 1.	4.3	1
29	Distributed Small-Signal Equivalent Circuit Model and Parameter Extraction for SiGe HBT. IEEE Access, 2019, 7, 5865-5873.	4.2	2
30	Analytical Parameter Extraction for Small-Signal Equivalent Circuit of 3D FinFET Into Sub-THz Range. IEEE Access, 2018, 6, 19752-19761.	4.2	8
31	Investigation of total dose effects in SiGe HBTs under different exposure conditions. Radiation Physics and Chemistry, 2018, 151, 84-89.	2.8	7
32	Linear and Resolution Adjusted On-Chip Aging Detection of NBTI Degradation. IEEE Transactions on Device and Materials Reliability, 2018, 18, 383-390.	2.0	10
33	Analytical Layout Dependent NBTI Degradation Modeling Based on Non-Uniformly Distributed Interface Traps. IEEE Transactions on Device and Materials Reliability, 2018, 18, 397-403.	2.0	3
34	Analytical gate fringe capacitance model for nanoscale MOSFET with layout dependent effect and process variations. Journal Physics D: Applied Physics, 2018, 51, 275104.	2.8	2
35	Single Event Transients in SiGe HBT. Springer Theses, 2018, , 93-116.	0.1	0
36	Parameter Extraction of SiGe HBTs. Springer Theses, 2018, , 133-163.	0.1	0

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37	Small-Signal Equivalent Circuit for SiGe HBT Based on Distributed Network. Springer Theses, 2018, , 117-132.	0.1	0
38	Displacement Effects in SiGe HBT. Springer Theses, 2018, , 57-92.	0.1	0
39	Novel method to determine base resistance in SiGe HBT from small-signal S -parameters measurement. Microwave and Optical Technology Letters, 2017, 59, 555-560.	1.4	0
40	Analytical long-term NBTI recovery model with slowing diffusivity and locking effect of hydrogen considered. Microelectronics Reliability, 2017, 75, 20-26.	1.7	4
41	Novel tri-independent-gate FinFET for multi-current modes control. Superlattices and Microstructures, 2017, 109, 374-381.	3.1	12
42	Highly flexible SRAM cells based on novel tri-independent-gate FinFET. Superlattices and Microstructures, 2017, 110, 330-338.	3.1	3
43	Evaluation of lattice dynamics, infrared optical properties and visible emissions of hexagonal GeO_2 films prepared by liquid phase deposition. Journal of Materials Chemistry C, 2017, 5, 12792-12799.	5.5	11
44	Direct analytical parameter extraction for SiGe HBTs T-topology small-signal equivalent circuit. Superlattices and Microstructures, 2016, 94, 223-230.	3.1	4
45	Experimental study of bias dependence of pulsed laser-induced single-event transient in SiGe HBT. Microelectronics Reliability, 2016, 65, 41-46.	1.7	8
46	In-situ investigation of DC characteristics degradation in SiGe HBT included by halogen lamp irradiation. Superlattices and Microstructures, 2016, 98, 62-69.	3.1	1
47	Gate-to-source/drain fringing capacitance model with process variation of MOSFET in 40nm generation. , 2016, , .		1
48	A new physical insight of RESURF effects based on gradual charge appointment concept for bulk silicon lateral power devices. Superlattices and Microstructures, 2016, 92, 111-123.	3.1	5
49	Novel analytical parameter extraction for SiGe HBTs based on the rational function fitting. Superlattices and Microstructures, 2015, 80, 11-19.	3.1	2
50	An Improved Small-Signal Model for SiGe HBT Under OFF-State, Derived From Distributed Network and Corresponding Model Parameter Extraction. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 3131-3141.	4.6	10
51	Novel method to determine base resistance in SiGe HBT HICUM based on rational function fitting. , 2014, , .		1
52	Novel extraction of emitter resistance of SiGe HBTs from forward-Gummel measurements. , 2014, , .		1
53	Investigation of bias dependence on enhanced low dose rate sensitivity in SiGe HBTs for space application. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 738, 82-86.	1.6	5
54	Bias dependence of ionizing radiation damage in SiGe HBTs at different dose rates. Physica B: Condensed Matter, 2014, 434, 95-100.	2.7	8

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55	Impact of bias conditions on performance degradation in SiGe HBTs irradiated by 10MeV Br ion. Microelectronics Reliability, 2014, 54, 2728-2734.	1.7	4
56	Degradation differences in the forward and reverse current gain of 25MeV Si ion irradiated SiGe HBT. Physica B: Condensed Matter, 2014, 449, 186-192.	2.7	4
57	Irradiation effects of 25MeV silicon ions on SiGe heterojunction bipolar transistors. Nuclear Instruments & Methods in Physics Research B, 2013, 312, 77-83.	1.4	15
58	The reliability of SiGe HBT under swift heavy ion irradiation. , 2013, , .		0
59	Investigation of process variation in vertically stacked gate-all-around nanowire transistor and SRAM circuit. Semiconductor Science and Technology, 0, , .	2.0	7